DOCUMENT RESUME

ED 216 593 HE 015 014

AUTHOR Bridgwater, Carol Austin; Walkenbach, John
TITLE Inaccuracies in Recently Published Departmental Rankings: An Empirical Demonstration.
PUB DATE Apr 81
NOTE 9p.; Paper presented at the Annual Meeting of the Western Psychological Association (Los Angeles, CA, April 1981).

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Authors; *College Faculty; *Departments; Higher Education; Periodicals; Productivity; Psychologists; *Psychology; *Publications; *Research Methodology; Research Problems
IDENTIFIERS *Faculty Publishing; *Ranking

ABSTRACT

Endler, Ruchton, and Roediger's (1979) method of obtaining exact publication counts for individual psychologists in order to make ratings of psychology departments was evaluated. Using the 1975 "Social Science Citation Index" (SSCI) as a data base, Endler et al. ranked departments on total citation and total publication counts. Additionally, they provided ranks based on mean citation and publication counts. Attention was focused on the Endler et al. study to determine the accuracy of publication counts obtained from the SSCI in comparison to self-reported publications. Self-reported 1975 publications were obtained from 113 psychologists, and publication counts were made by 16 categories. The 1975 SSCI "Source Index" was used to estimate what Endler and associates' count would have been for each of the 113 psychologists. Only 174 of the 260 reported publications could be found in the 1975 "Source Index." Moreover, the correlation between an individual's SSCI count and self-reported publications was .61, which is low given the large number of journals (over 3,000) referenced in the 1975 SSCI. "Psychological Abstracts" was then evaluated in a similar manner to determine if it would be a more reliable source for counting publications. The analysis yielded only a moderate correlation of .65. Based on the findings and additional analysis, it appeared that discrepancies between self-reported counts and archival sources were probably due to oversight and inaccuracies in the archival sources. The errors could significantly alter a department's rank in the Endler et al. study. (SW)

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Inaccuracies in Recently Published Departmental Rankings: An Empirical Demonstration

by

Carol Austin Bridgwater

John Walkenbach

University of Montana

U.S. DEPARTMENT OF EDUCATION
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Paper presented at the meetings of the

Western Psychological Association

Los Angeles, April 1981

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The comparative quality of psychology departments has been subjected to empirical inquiry for over twenty years. One of the more visible studies was conducted by Roose and Andersen (1970), who ranked departments based on the subjective opinions of academicians. Roose and Andersen's subjective departmental rankings were later challenged by Cox and Catt (1978), who provided rankings based on a more objective data base. Specifically, they rank ordered psychology departments on the basis of articles published in the 13 APA journals during the years 1970-1976. A year later, Endler, Rushton and Roediger (1979) provided yet another system for rank ordering departments. Using the 1975 Social Science Citation Index as a data base, Endler et al. ranked departments on total citation and total publication counts. Additionally, they provided ranks based on mean citation and publication counts.

Both the Cox and Catt, and Endler et al. studies have understandably received considerable attention since their publication. Departmental ranks may influence factors such as securing grant monies, attracting faculty members, graduate students, etc. Moreover, comparative ranking is bound to have some effect on a department's internal status within its own university. Consequently, the reliability of published department ranks is more than an academic issue.

Both studies have already received some criticism with regards to certain inaccuracies. For example, in some cases, inaccurate faculty sizes were used to determine mean publications and citations per faculty member. There were also problems in properly identifying faculty members in the SSCI due to the same individual being listed under two or three different names. Similarly, there was confusion between psychologists with identical surnames. In some cases, the above errors considerably altered the

rankings of certain individuals (Rossenberg, 1979; Swartz, 1979) as well as entire departments (Kleinmuntz, 1978; Levin, 1978).

The data presented in this paper, however, illustrate an even greater and more pervasive source of error in archival publication counts. In particular, we focused on the Endler et al. study to determine the accuracy of publication counts obtained from the Social Science Citation Index in comparison to self-reported publications.

Through another research project, we had access to self-reported publications from 1965-1979 for 298 psychologists. Publication counts for the 15 years were broken down into 16 categories, including journal articles, paper presentations, books, book chapters, monographs, etc. Since we were interested in a comparative analysis that had direct relevance to the Endler et al. study, we refined our data pool to include only subjects who listed journal publications in 1975. Further, we only used subjects with unambiguous names to eliminate the problem of subject identification mentioned earlier. Our final subject pool included 113 psychologists, whose 1975 journal publications ranged from one to seven. In total, our subjects reported 260 journal articles published in 1975.

Following Endler et al.'s exact methodology, we then used the 1975 SSCI Source Index to estimate what their count would have been for each of our 113 subjects. Only 174 of the 260 reported publications could be found in the 1975 Source Index. Moreover, the correlation between an individual's SSCI count and self-reported publications was only .61 -- surprisingly low given the extensive number of journals (over 3,000) referenced in the 1975 SSCI.

We then turned to Psychological Abstracts to see if this might be a more reliable alternative source for counting publications. We correlated the 1975 publications listed in Psych Abstracts with our subjects' self report for that year. Again, the analysis yielded only a moderate correlation of .65, even though the 1975 Psych Abstracts references close to 1,000 source journals.

A third analysis shed more light on the interpretation of these moderate correlations. While the number of total articles found in the Psychological Abstracts was nearly identical to the number listed in the SSCI, there was only a 35.4% overlap between the articles listed by both sources. We thus correlated self-reported publications with the number of articles listed in both sources, eliminating duplicate publications. The resulting correlation was increased to .73, but was still a far cry from what would ideally be expected. If Psych Abstracts or the SSCI were exhaustive and accurate indices of psychologists' journal publications, one would expect correlations in the .90's. That our three analyses yielded much lower correlations questions the accuracy of both archival sources.

In particular, our results have the most bearing on the Endler et al. data, since we followed their methodology exactly in our first analysis. When discrepancies between self-reported counts and those in the SSCI occurred, our subjects tended to list from one to four more publications than could be found in the SSCI. Often, the missing publication(s) was listed in Psych Abstracts. For example, several of our subjects each reported four 1975 publications, none of which could be found in the SSCI, but all of which were listed in Psych Abstracts. Conversely, often the SSCI would list all the publications for a given subject, but Psych Abstracts would not. Of

course, some of this error must be due to nonoverlapping source journals between the two indices. This, however, is probably minimal. Rather, the discrepancies between self-reported counts and archival sources are probably due to oversights and inaccuracies in the archival sources themselves, as suggested by the correlation of only .73 between self-reported counts and counts from the SSCI and Psych Abstracts combined.

The major point, however, is that even discrepancies of one or two publications for occasional subjects is not trivial. Errors such as these could significantly alter a department's rank in the Endler et al. study. To illustrate this point, we examined the rankings of several departments. For example, 16 subjects from our original pool of 298 were faculty members at the University of California, Los Angeles. Six of those subjects did not list publications in 1975. The other 10 reported a combined total of 19 publications -- only 12 of which were listed in the SSCI. In other words, there was a discrepancy of seven publications for UCLA between self-reported counts and listings in the SSCI.

In the Endler et al.study, UCLA was ranked between twelfth and thirteenth on the basis of total publications for the entire department. Adding seven more publications to the departmental total would have moved UCLA up to 8th -- a rise in rank that is of some importance. Remember, also, that the discrepancy of seven publications was based only on data reported from less than 25% of UCLA's faculty. Had accurate counts been available for the entire faculty, our data suggest that UCLA's total publication count would surely have been markedly different than that reported by Endler et al.

The effect of SSCI errors on departmental rankings was even more pronounced for the lower ranked schools. For example, we had nine repondents

from the University of Alabama, who also reported seven more publications than could be located in the SSCI. Alabama was ranked 69th in the Endler et al. study. Including those seven publications would have moved Alabama up 14 notches to a rank of 54th. Again, note that this increase was based only on discrepancies reported by nine subjects, from a faculty of over 20.

Of course, discrepancies between actual publications and those listed in the SSCI undoubtedly occurred for nearly every department included in the Endler et al. study. How the study would have changed if publication counts had been more accurate across departments is impossible to say. The point, however, is that our data suggest that both the SSCI and Psych Abstracts are not the paragons of accuracy and exhaustiveness that is often assumed by researchers. In the case of the Endler et al. study, the consequences of these inaccuracies are quite obviously of some importance.

Of course, the logical refutation to our argument is that our data were the major source of error, and were primarily responsible for the moderate correlations. This is unlikely, however, for several reasons. First, of the three sources (SSCI, Psych Abstracts, and self-report), our subjects would most certainly have the most complete list of their own publications. The possibility of purposefully inflating publication counts is unlikely since our subjects were assured of confidentiality and would have no overt reasons for doing so. Moreover, the number of 1975 journal articles was only one figure among many reported by our subjects. This means that they would have to inflate most of their counts (including books, papers, chapters, monographs, etc.) across the 15 years in order to account for the substantial inaccuracies uncovered for journal articles in the year 1975.

While some computational and clerical errors could have occurred by our subjects, one would think that of any professional group, they would be keenly aware of the importance of accurate self-reports to the reliability of this type of research. Finally, that some articles were listed for our subjects in Psych Abstracts, but not in the SSCI, and vice versa, argues that the discrepancy had to be due, in part, to errors and oversights in the archival sources.

Since only publications from one year were examined, the present research has some limitations in generalizing results to other studies which have used archival publication counts as major dependent measures (Goldstein, 1979; Guyer & Fidell, 1973; Helmreich, Spence, Beane, Lucker and Matthews, 1980). Our results have the most bearing on the Endler et al. study. However, some general conclusions can be made. Specifically, Psych Abstracts and the SSCI appear to be second best sources for obtaining exact publication counts for individual psychologists. Unfortunately, the feasibility of using self-reported publications in future research depends on the issue being investigated. It will undoubtedly be necessary to continue using archival sources to some degree in future productivity research. In doing so, however, researchers should be aware of the potential limitations of this method.

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